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NOTICE OF ALLOWANCE AND FEE(S) DUE

30678

7590

12/11/2009

CONNOLLY BOVE LODGE & HUTZ LLP
1875 EYE STREET, N.W.
SUITE 1100
WASHINGTON, DC 20006

EXAMINER

AJAYI, JOEL

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 12/11/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,545	09/12/2003	Arto Palin	27592-00431-US	6422

TITLE OF INVENTION: METHOD AND SYSTEM FOR PROCESSING ACKNOWLEDGMENTS IN A WIRELESS COMMUNICATIONS NETWORK

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	03/11/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

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B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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30678 7590 12/11/2009
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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/660,545 09/12/2003 Arto Palin 27592-00431-US 6422

TITLE OF INVENTION: METHOD AND SYSTEM FOR PROCESSING ACKNOWLEDGMENTS IN A WIRELESS COMMUNICATIONS NETWORK

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	03/11/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
AJAYI, JOEL	2617	370-216000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

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This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.**

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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 876 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 876 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.

10/660,545

Examiner

JOEL AJAYI

Applicant(s)

PALIN ET AL.

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the communication received on November 04, 2009.
2. ☒ The allowed claim(s) is/are 1,3-11,13,15-17 and 19-24.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jeffrey Gluck (Reg. No. 44,457) on November 19, 2009.

The application has been amended as follows:

1. (Currently Amended) A method of controlling a multicast transmission, comprising:
transmitting a data packet to a plurality of devices across an ultra wideband (UWB) wireless network;
detecting the reception of any acknowledgement transmissions, wherein each acknowledgement transmission indicates reception of the data packet by a respective one of the plurality of devices;
generating a correlation signal based on correlating received signals with a predetermined acknowledgment sequence;
retransmitting the data packet to at least one of the plurality of devices when an acknowledgement is not detected for each of the plurality of devices;
counting the number of consecutive times an acknowledgement packet is not received from a particular one of the plurality of devices; and
~~foregoing~~ foregoing retransmission of the data packet when said number of consecutive times exceeds a first predetermined threshold and when the correlation signal fails to exceed a second predetermined threshold during each of a plurality of time slots allocated to respective ones of the plurality of devices ~~detecting step detects an acknowledgement transmission from the each of the plurality devices except for said particular device.~~
2. (Cancelled).

3. (Previously Presented) The method of claim 1, wherein the detecting comprises receiving said any acknowledgement transmissions from the UWB wireless network.
4. (Previously Presented) The method of claim 1, wherein the detecting comprises receiving said any acknowledgement transmissions from a transmission media different than the UWB wireless network.
5. (Original) The method of claim 4, wherein the different transmission media comprises Bluetooth.
6. (Currently Amended) The method of claim 1, wherein generating the correlation signal ~~the detecting~~ comprises correlating received signals with [[a]] the predetermined acknowledgement sequence during a time slot allocated to the devices for acknowledgement transmission.
7. (Currently Amended) The method of claim 6, wherein the detecting further comprises: ~~generating a correlation signal from the predetermined acknowledgement sequence and received transmissions; and~~
counting the number of times the correlation signal exceeds a predetermined threshold.
8. (Previously Presented) The method of claim 7, wherein said counting is performed during a time division multiple access (TDMA) time slot allocated to upstream transmissions from the plurality of devices.
9. (Previously Presented) The method of claim 7, wherein the retransmitting comprises retransmitting the data packet when the number of times the correlation signal exceeds the predetermined threshold is less than the number of the plurality of devices.

10. (Currently Amended) The method of claim 6, wherein the time slots comprise detecting further comprises:

~~generating a correlation signal from the predetermined acknowledgement sequence and received transmissions; and~~

~~determining whether the correlation signal exceeds a predetermined threshold during each of a plurality of time division multiple access (TDMA) time slots, wherein each of the TDMA time slots are allocated to respective ones of the plurality of devices.~~

11. (Previously Presented) The method of claim 10, wherein the retransmitting comprises retransmitting the data packet when the correlation signal fails to exceed the predetermined threshold during each of the plurality of time division multiple access (TDMA) time slots.

12. (Cancelled)

13. (Currently Amended) A wireless communications device, comprising:

a transmission buffer configured to store a packet for transmission across an ultra wideband (UWB) wireless network to a plurality of devices;

a retransmission buffer configured to store a retransmission packet, the retransmission packet being previously transmitted across the UWB wireless network; and

a retransmission controller configured to receive one or more acknowledgement transmissions from the plurality of devices,

wherein the wireless communications device is configured to count the number of consecutive times an acknowledgement packet is not received from a particular one of the plurality of devices; [[and]]

to generate a correlation signal based on correlating received signals with a predetermined acknowledgment sequence; and

to forego retransmission of the data packet when said number of consecutive times exceeds a predetermined threshold and when the correlation signal fails to exceed a second predetermined threshold during each of a plurality of time slots allocated to respective ones of

~~the plurality of devices an acknowledgement transmission from the each of plurality devices except for said particular device is detected.~~

14. (Cancelled)

15. (Original) The wireless communications device of claim 13, wherein said acknowledgement transmissions are received from a transmission media different then the UWB wireless network.

16. (Previously Presented) The wireless communications device of claim 15, wherein said the different transmission media comprises Bluetooth.

17. (Currently Amended) A system for controlling a multicast transmission, comprising:
means for transmitting a data packet to a plurality of devices across an ultra wideband (UWB) wireless network;

means for detecting the reception of any acknowledgement transmissions, wherein each acknowledgement transmission indicates reception of the data packet by a respective one of the plurality of devices;

means for generating a correlation signal based on correlating received signals with a predetermined acknowledgment sequence;

means for retransmitting the data packet to the one or more devices when an acknowledgement is not detected for each of the one or more devices;

means for counting the number of consecutive times an acknowledgement packet is not received from a particular one of the plurality of devices; and

means for ~~forgoing~~ ~~foregoing~~ retransmission of the data packet when said number of consecutive times exceeds a predetermined threshold and when the correlation signal fails to exceed a second predetermined threshold during each of a plurality of time slots allocated to respective ones of the plurality of devices ~~said means for detecting detects an acknowledgement transmission from the each of the plurality devices except for said particular device.~~

18. (Cancelled)

19. (Original) The system of claim 17, further comprising means for receiving said any acknowledgement transmissions from a transmission media different than the UWB wireless network.

20. (Original) The system of claim 19, wherein the different transmission media comprises Bluetooth.

21. (Currently Amended) A computer-readable medium encoded with processing instructions for implementing operations for a method of controlling multicast transmission, performed by a wireless communication device, the operations method comprising:

transmitting a data packet to a plurality of devices across an ultra wideband (UWB) wireless network;

detecting the reception of any acknowledgement transmissions, wherein each acknowledgement transmission indicates reception of the data packet by a respective one of the plurality of devices;

generating a correlation signal based on correlating received signals with a predetermined acknowledgment sequence; [[and]]

retransmitting the data packet to at least one of the plurality of devices when an acknowledgement is not detected for each of the plurality of devices;

counting the number of consecutive times an acknowledgement packet is not received from a particular one of the plurality of devices; and

~~foregoing~~ forgoing retransmission of the data packet when said number of consecutive times exceeds a predetermined threshold and when the correlation signal fails to exceed a second predetermined threshold during each of a plurality of time slots allocated to respective ones of the plurality of devices ~~detecting step detects an acknowledgement transmission from the each of the plurality devices except for said particular device.~~

22. (Currently Amended) The computer-readable medium of claim 21, wherein the detecting [[step]] comprises receiving said any acknowledgement transmissions from a transmission media different than the UWB wireless network.
23. (Previously Presented) The computer-readable medium of claim 22, wherein the different transmission media comprises Bluetooth.
24. (Previously Presented) The wireless communications device of claim 13, wherein the retransmission controller is further configured to cause the retransmission buffer to send the retransmission packet to the plurality of devices across the UWB wireless network when an acknowledgement is not detected for each of the plurality of devices.

REASON FOR ALLOWANCE

Allowable Subject Matter

Claims 1, 3-11, 13, 15-17 and 19-24 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The closest prior art of record, Rosen, is an exemplary reference that closely approximates the applicant's invention. Rosen discloses an acknowledgement sequence that includes retransmission and a retransmission limit or threshold. However Rosen does not disclose a method of controlling a multicast transmission, comprising: transmitting a data packet to a plurality of devices across an ultra wideband (UWB) wireless network; detecting the reception of any acknowledgement transmissions, wherein each acknowledgement transmission indicates reception of the data packet by a respective one of the plurality of devices; generating a correlation signal based on correlating received signals with a predetermined acknowledgment sequence; retransmitting the data packet to at least one of the plurality of devices when an acknowledgement is not detected for each of the plurality of devices; counting the number of consecutive times an acknowledgement packet is not received from a particular one of the plurality of devices; and forgoing retransmission of the data packet when said number of

consecutive times exceeds a first predetermined threshold and when the correlation signal fails to exceed a second predetermined threshold during each of a plurality of time slots allocated to respective ones of the plurality of devices.

Conclusion

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Joel Ajayi whose telephone number is (571) 270-1091. The Examiner can normally be reached on Monday-Friday from 7:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 2617

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

/Joel Ajayi/

Examiner, Art Unit 2617

/NICK CORSARO/

Supervisory Patent Examiner, Art Unit 2617